

The Effects of an Online Career Intervention on University Students' Levels of Career Adaptability

Anna Veres

Abstract—People's ability to adapt to a constantly changing environment is essential. Career adaptability is central to Career Construction Theory, where proper adaptation to new situations, changing environments, and jobs require adequate career development. Based on current career theories and the possibilities offered by digital technology, the primary goal of this study is to develop career adaptability through an online tool. Its secondary goal is to apply for an online career intervention program and explore its developmental possibilities. A total of 132 university students from the bachelor program took part in the study, from which 65 students received a four-week online career intervention, while 67 participants formed the control group. Based on the results, it can state that career adaptability can be developed, and there is a great demand and interest from university students to use career-related programs on online platforms. Career interventions should be performed online as well if there is suitable software and a well-constructed program. Limitations and further implications are discussed.

Keywords—Career adaptability, career development, online career intervention, university student.

I. INTRODUCTION

INFORMATION and communication technology (ICT) is now available in almost every area of life. Career counseling is no exception, as in recent decades, ways of incorporating ICT into a career, counseling has been increasingly explored [3], [4].

Several studies have shown that users are interested in developing their career-related competencies on an online platform [4], [5]. Users are curious about the opportunities offered by computers and programs. These programs seem to be useful in a certain way. As soon as computers or software were used in counseling sessions, studies appeared examining the impact of these new tools, often compared to traditional face-to-face career counseling. The following is an overview of the types of interventions that have been used in some way to promote career development.

An online career guidance program for career maturity has been successful with high school students; those who have participated in online intervention have shown significant growth in their career maturity level [6]. An earlier study was similarly successful where it was found that online narrative based on career interventions was effective in career counseling, as participants exhibited less career indecision and more career certainty [7].

To facilitate occupational exploration and career decision making, there was another successful internet-delivered career

development intervention, called Career HOPES, where the participants in the treatment group showed greater scores in career decidedness than the control group [8]. More recent research shows that career and self-construction helped high school students manage their career-related transitions [9].

In their research, Nota et al. [10] investigated how effective an online career intervention, based on life design principles, can be. Primary school students participated in the study, and they formed a group of online and traditional career interventions. Pre-test and post-test measurements were compared and concluded that students who received the online intervention had a higher level of career adaptability and life satisfaction.

In another study where the aim was to improve career development, the impact of an online career intervention was investigated. Some of the research participants received face-to-face counseling and another group, online career counseling. The results showed that both online and face-to-face interventions increased students' career development levels compared to the control group [11]. So, there was no difference between the two modalities. Nevertheless, one of the meta-analyses that investigated the treatment modalities in career counseling concluded that the use of a computer system supplemented by the presence of a counselor face-to-face was more effective than the computer-based exercises and tasks alone [1]. In the most recent meta-analysis, similar results were found, where the effectiveness of career choice interventions was investigated. It has been found that the effectiveness of computer intervention alone or predominantly computer-based intervention was much lower than that of traditional intervention [2].

Balanced career development involves the fact that in difficult times, the individual can adequately solve his or her career problems. The reasons for large university drop-out rates may be due to several reasons, such as the inability to decide or lack of information [12]. Therefore, it is worth examining and discussing career development in the context of dropping out. In Romania, the drop-out rate of students enrolled in university is very high [13], meaning that they do not complete their Bachelor's Degree (BsC). The same is true for university students who choose to help professions, as in this case there is also an enormous proportion of students who do not finish their studies, between 30-45% of the enrolled students drop out already in the first year [31]. There are several reasons for the high drop-out rates, which can be well explained by the career

A. Veres is with the Department of Applied Psychology, Babeş-Bolyai University, Cluj-Napoca 400604 Romania (phone: 0040740251089; e-mail: anna.veres@ubbcluj.ro).

barrier model [14]. There may be a lack of motivation and general inability to make decisions, so the choice of degree will only be a minor bad or a decision suggested by the environment. Another reason may be inadequate information and inconsistent information about the faculty, which causes the student not to get what he/she expected, which will make it easier for him/her to leave the program or freeze it. All this was well supported by a study conducted at Babes-Bolyai University in 2014, confirming that students have little information about job opportunities, expectations are not in line with their knowledge and abilities, and they do not have a coherent plan. In addition, they face many obstacles in their career decision-making process as well [12]. So, bearing in mind that students perceive many obstacles in their career development and the popularity of online career counseling platforms, the study attempted to facilitate their career development with an online program where students specifically develop their career adaptability.

Job diversity and rapid change in career development also require the person to be constantly adapted to different roles [15]. In other words, the existence of career adaptability is vital for smooth career development. Career adaptability itself is defined by Savickas [16] as “a psychosocial construct that denotes an individual’s readiness and resources for coping with current and imminent vocational developmental tasks, occupational transitions, and personal traumas” (p.51). Savickas [17] describes the four dimensions of response readiness and coping resources that constitute career adaptabilities, such as concern, control, curiosity, and confidence. He conceptualized adaptive individuals as:

1. “Becoming *concerned* about their future as a worker.
2. Increasing personal *control* over their vocational future.
3. Displaying *curiosity* by exploring possible selves and future scenarios.
4. Strengthening the *confidence* to pursue their aspirations.” (p.52).

Several studies show that career adaptability (CA) (and life satisfaction (LS)) can be improved by traditional 6-week interventions [18], or by a one-day intense training [19], or by 3 sessions of an online intervention [10].

Based on preliminary research, this study focused on the career development outputs of CA and career satisfaction. To make the intervention online, professional web developers created a website (www.karrier-labor.ro) where the students can spend one and a half hours each week on career-related tasks for four weeks. To sum up, the paper is attempting to increase the CA of college students through the use of an online program developed by specialists.

A. The Purpose of the Study

In this study, an intervention was developed that combines elements of self-knowledge with elements of career construction intervention, all in favor of a clearer insight [20], [21], and better management of career transition [22].

The main aim was to effectively improve CA as an adaptability resource, which will be revealed in the students’ career paths, taking into consideration that professions and job requirements are constantly changing. On the other hand,

another goal was to test the effectiveness of an online career intervention and the extent to which such interfaces are needed when it comes to career construction.

B. Objectives

The main objectives of this paper are to create and develop an online platform that promotes career development.

- H1. Compared to a control group, the experimental group will show an increase in CA (in terms of career concern, control, curiosity, and confidence), immediately after the intervention and six months later.
- H2. Compared to a control group, the experimental group will show an increase in career satisfaction immediately after the intervention and six months later.

II. METHODS

A. Sample

A total of 132 university students from the bachelor program took part in the study, from which 49.2% (n = 65) formed the training group and 50.8% (n = 67) formed the control group. All the students completed the pre-training measurement (Time1) and the post-training measurement (Time 2), and only 92 students (69.69%) completed the follow-up measurement six months later (Time 3). From these students, 50 participants (54.3%) formed the control group, and 42 participants (45.7%) formed the experimental group. The final sample that had participated in the follow-up well consisted of 81 women (88%) and 11 men (12%) with a mean age of 21.2 (SD = 1,98) years. All participants were from the Faculty of Psychology and Educational Sciences and from the Faculty of Sociology and Social Work.

B. Instruments

After collecting the demographic data, the participants filled out the *CAAS-Hungarian Form* [23] in order to measure concern, control, curiosity, confidence, and in total, CA. The CAAS-International contains 24 items that are combined to form a total score that indicates CA [22]. The CAAS-Hungarian Form has only 23 items due to one missing item, which did not satisfy the procedure of validation. The scale is divided into four subscales that measure the adaptability resources of concern (6 items), control (6 items), curiosity (5 items), and confidence (6 items).

Participants responded to each item choosing a scale from 1 (not strong) to 5 (strongest).

The concern subscale measures how consciously a person is prepared for future tasks. The control subscale indicates the degree of responsibility for shaping their own career path. Curiosity refers to the extent to which an individual is willing to explore his or her opportunities and resources. In this context, confidence means self-confidence, which has an important role in dealing with vocational or career tasks [22].

The career satisfaction was measured with a five-item *Career Satisfaction Scale* developed by Greenhaus et al. [24]. On our sample reliability, it was good ($\alpha = .86$).

To investigate social validity, four questions were asked in the experimental group after the intervention, at post-test

(Time2). With these four questions, the aim was to explore how useful the program was to the users. The first three questions were the following: *How useful was it to solve online tasks and fill out questionnaires? How useful do you find the emails sent with the results? How useful were the reminders?* The following answers were given to choose from: *Very useful, Useful, Rather useful, Rather not useful, Not useful, Not useful at all*. In the fourth question, we asked which modality is more preferred (*Would you prefer the online tasks and questionnaires or the paper-pencil form?*) There were four answers: Paper pencil form, Online form, Indifferent, or Other.

C. Design and Procedure

The purpose of the longitudinal field quasi-experimental study was to examine the extent to which the use of an online career program affects the career development of students. More specifically, individuals in the study were compared across CA and career satisfaction. The two groups we compared were those who participated in a four-week online career intervention (training group) and those who did not (control group). The pre-test was taken during the seminars a few days before the intervention (Time 1), while the post-test data was collected right after the intervention (Time 2) and the follow-up data were gathered through email six months after the intervention (Time 3). Both experimental and control groups were recruited from the Faculty of Psychology and Education. The experimental group consisted of students who met each week at a given seminar. Although the two groups were not randomized, there was no significant difference between the control group and the experimental group at the pre-test. The participants volunteered and used their data anonymously and signed a consent statement.

D. Career Intervention-Training Process

The structure of the online platform was specially designed for this study (Fig. 1). The structure and process of the follow-up modules were based on the combination of theoretical work by Brown and Krane [20], The Life Design Group Guide by Barclay and Stoltz [21], and suggestions from career counselors. We also took into consideration that online self-assessment, which is the main part of the intervention, should include not only scoring but also an individual interpretation of the scores, and if it is the case, recommendations for future actions.

The modules were completed during seminars, 30-40 minutes/module, one module/week.

After a student had registered to the website, they received a confirmation email, and they could easily start the program following the instructions. Table I presents the structure of the online intervention.

Each student from the experimental group participated in a four-week online program with activities related to their career development. Firstly, a career counselor introduced the site where they registered with their email address and agreed to their data being used anonymously. After the registration, the first module started, where two tests were completed and then interpreted. In the first module, participants completed a 60-

item version of the HEXACO Personality Test to find out which personality type fits them the most (Honesty-Humility, Emotionality, Extraversion, Agreeableness (versus Anger), Conscientiousness, Openness to Experience). The results were sent via email, and they could be analyzed and interpreted. After the HEXACO, they filled out the RIASEC inquiry questionnaire, which revealed the interests that can be matched to a certain job or career based on their personality. The aim of this module was to explore personality traits and career interests through which the participant develops his/her self-knowledge. The second module was accessible after seven days. In this module, a goal-setting exercise was undertaken to formulate the short, medium, and long-term goals of the participant for certain areas of life. They also received summary feedback via email. The third module was also completed one week later; in this part of the program, future career expectations were clarified, and tasks like categorization and prioritization of value systems were completed. In the last module, the participant had to prioritize his or her work-related values and then make a summary of the role models and activities he/she likes. After completing the four modules, they received a summary email giving feedback on the exercises and giving them the opportunity to participate in additional exercises if they wanted to.

If there was any question about the results, a career counselor was available online to answer. All the results of each module were emailed despite the fact that they had received every piece of information on their profile as well. The participants also received reminder emails informing them of their remaining time to complete the respective module, hoping that these reminders will promote a high participation rate in the research.

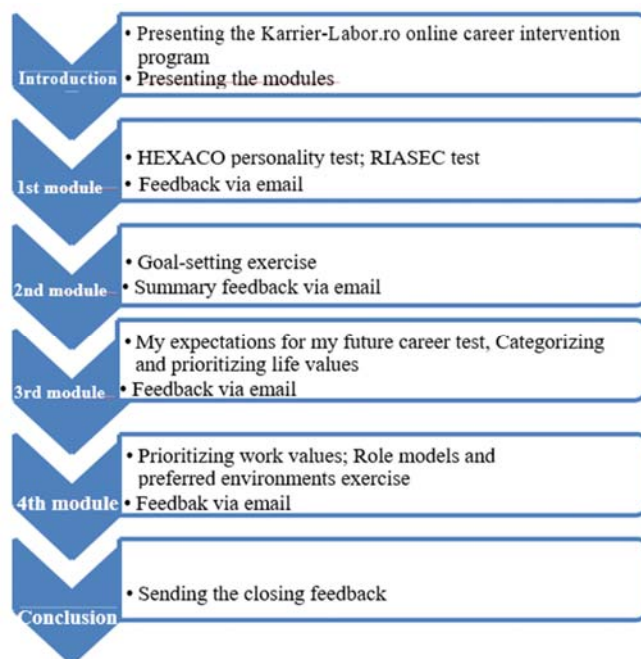


Fig. 1 The structure of the online intervention

III. RESULTS

A. Repeated Measures ANOVAs (Time 1, Time 2)

No differences were found between the two groups on career concern ($F(1,130) = .51, p = .47$), career control ($F(1,130) = .00, p = .98$), career curiosity ($F(1,130) = .00, p = .97$) and career confidence ($F(1,130) = .77, p = .38$), overall CA ($F(1,130) = .26, p = .61$), career cooperation ($F(1,130) = 1.1, p = .29$), career satisfaction ($F(1,130) = .52, p = .46$), LS ($F(1,130) = .77, p = .38$).

Repeated measures analyses of variance (ANOVAs) were conducted to determine whether the development of each dimension of CA was significant and could be ascribed to the

training, with the CA measures at each measurement point (pre-training, post-training) as the within-subjects variable and condition as the between-subjects variable.

The interaction condition \times time was significant for CA ($F(1, 130) = 12.02, p = .001, \eta^2p = .08$; see Fig. 2 (a)), career control ($F(1, 130) = 4.53, p = .03, \eta^2p = .03$; see Fig. 2 (c)) and career curiosity ($F(1, 130) = 16.59, p = .00, \eta^2p = .11$; see Fig. 2 (d)), career confidence ($F(1, 130) = 5.73, p = .01, \eta^2p = .04$; see Fig. 2 (e)), career cooperation ($F(1, 130) = 11.87, p = .00, \eta^2p = .08$; see Fig. 2 (f)); was not significant for career concern ($F(1, 130) = 3.32, p = .07, \eta^2p = .02$; see Fig. 18b). No other significant effects emerged for Career Satisfaction.

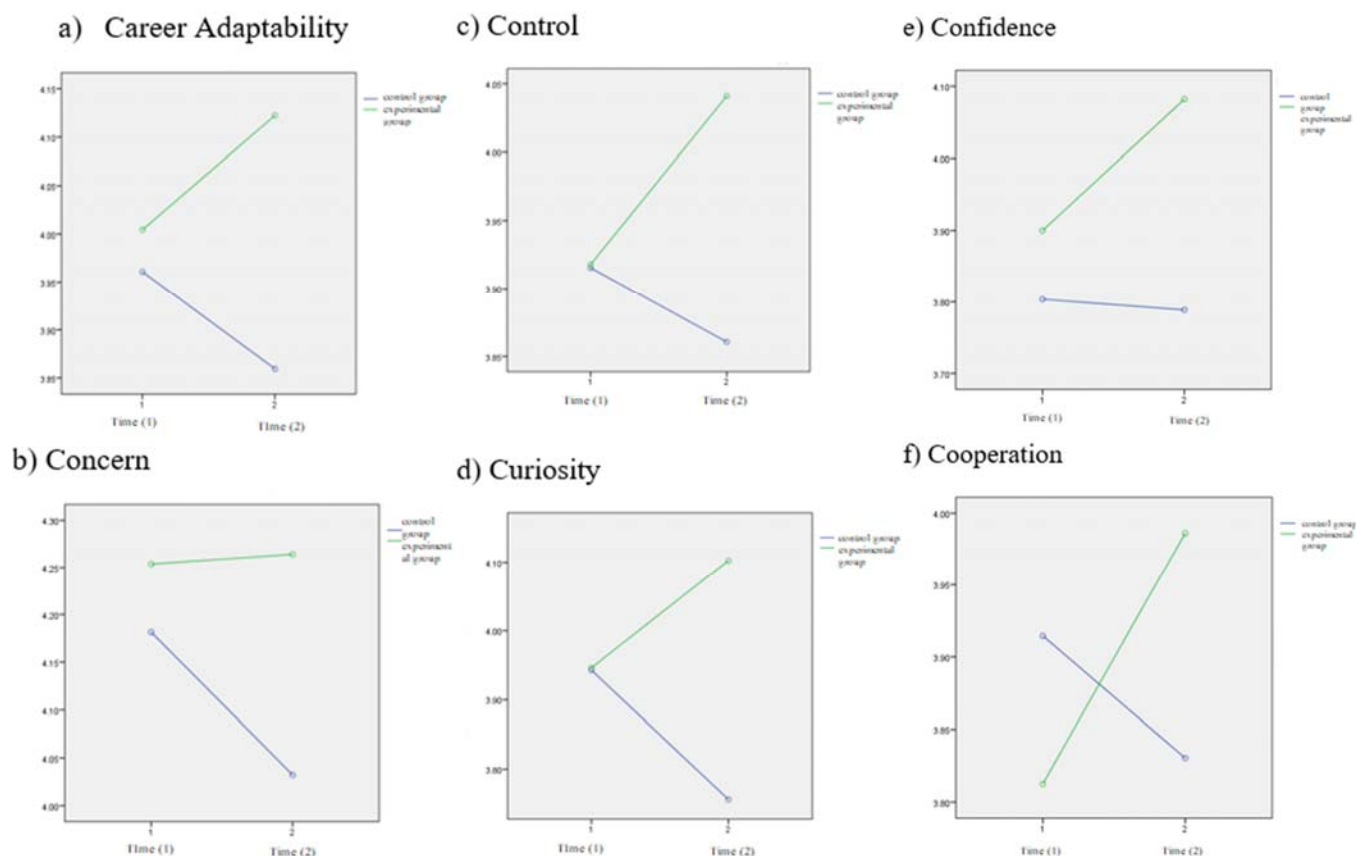


Fig. 2 Graphic representation of the dimensions of CA +cooperation at pre-training and post-training measurement for the training group and the control group

B. Repeated Measures ANOVAs (Time 1, Time 2, Time 3)

To make sure that the experimental group and the control group would be comparable, we checked whether the groups differed. No differences were found between the two groups on career concern ($F(1,90) = .76, p = .38$), career control ($F(1,90) = .03, p = .85$), career curiosity ($F(1,90) = 2.4, p = .12$) and career confidence ($F(1,90) = .28, p = .59$), overall CA ($F(1,90) = .08, p = .77$), career satisfaction ($F(1,90) = .76, p = .38$).

To test the first hypothesis repeated measures ANOVAs was conducted. Table I displays the means and standard deviations for overall CA and for each dimension of it, and for career satisfaction. Figs. 2 (a)-(f) show the graphic representations of these means. From the figures, we can read that the

experimental group scored higher on every dimension at the posttest (Time 2) than at the pretest (Time 1). Also, figures indicate that the experimental group scored higher on control, curiosity and confidence at the posttest measurement (Time 2) and at the follow-up measurement (Time 3) than at the pretest measurement (Time 1).

Repeated measures ANOVAs were conducted in order to determine whether the development of each dimension of CA and career satisfaction was significant and could be ascribed to the intervention.

Results showed that the interaction condition \times time was significant for CA ($F(2, 180) = 5.87, p = .00, \eta^2p = .06$; see Fig. 3 (a)), career curiosity ($F(2, 180) = 5.35, p = .00, \eta^2p = .05$; see

Fig. 3 (d)), career confidence ($F(2, 180) = 3.12, p = .04, \eta^2p = .03$; see Fig. 3 (e)); and was not significant for career concern ($F(1, 171.83) = 3.95, p = .05, \eta^2p = .04$; see Fig. 3 (b)), career control ($F(2, 180) = 2.37, p = .09, \eta^2p = .02$; see Fig. 3 (c)) and career satisfaction ($F(2, 180) = .56, p = .57, \eta^2p = .00$; see Fig. 3 (f)).

TABLE I
 VALUES OF THE DIMENSIONS OF CAREER: ADAPTABILITY, OVERALL CA AND CAREER SATISFACTION AT PRETEST, POSTTEST AND FOLLOW-UP MEASUREMENT FOR THE CONTROL GROUP AND THE EXPERIMENTAL GROUP

Dimension	Group	Pre-test (T1)		Post-test (T2)		Follow-up (T3)	
		D	D	D	D	D	D
Career	Control	.01	47	.85	59	.02	48
Adaptability	Experiment	.98	47	.10	46	.05	48
Career	Control	.26	50	.02	64	.21	53
concern	Experiment	.26	61	.28	58	.21	60
Career control	Control	.95	66	.86	69	.04	60
	Experiment	.92	65	.05	60	.07	62
Career	Control	.02	50	.79	65	.95	59
curiosity	Experiment	.85	51	.00	55	.97	56
Career	Control	.80	65	.74	72	.86	61
confidence	Experiment	.87	58	.07	59	.95	66
Career	Control	.00	57	.87	68	.79	84
satisfaction	Experiment	.89	65	.89	74	.80	67

N Experiment = 42 N Control = 50

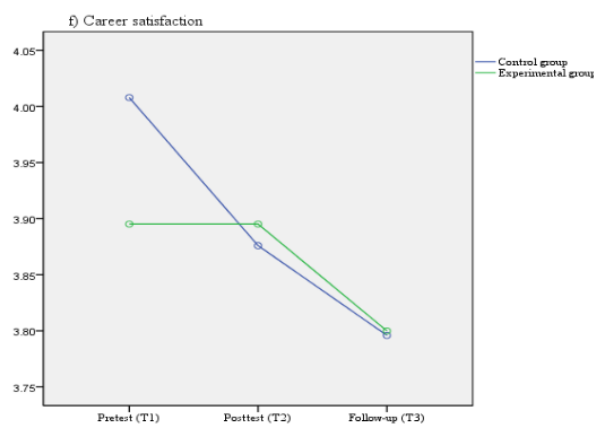
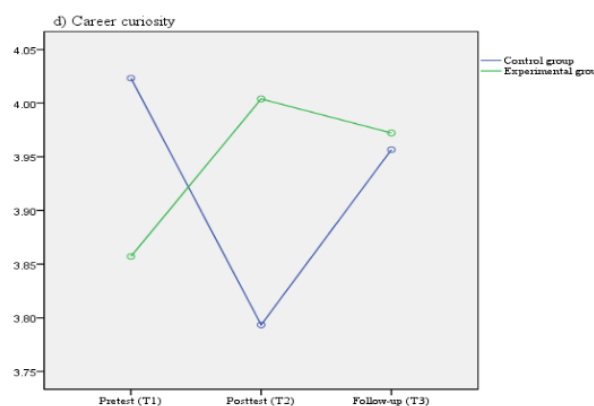
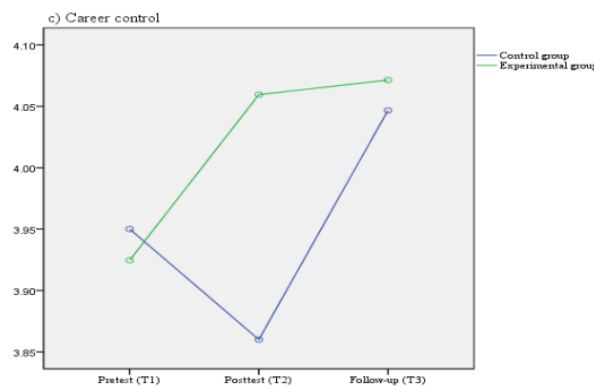
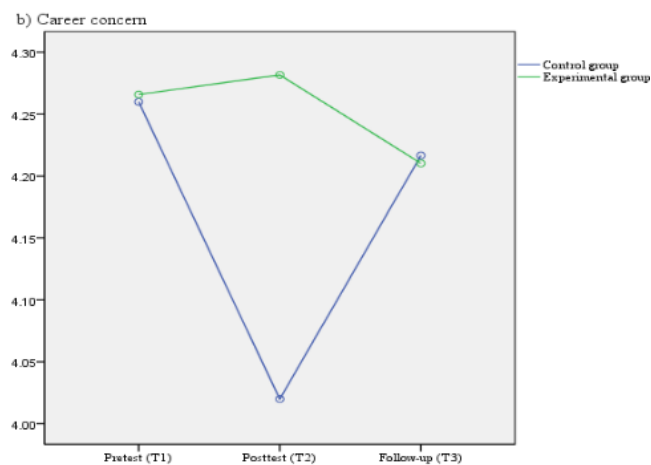
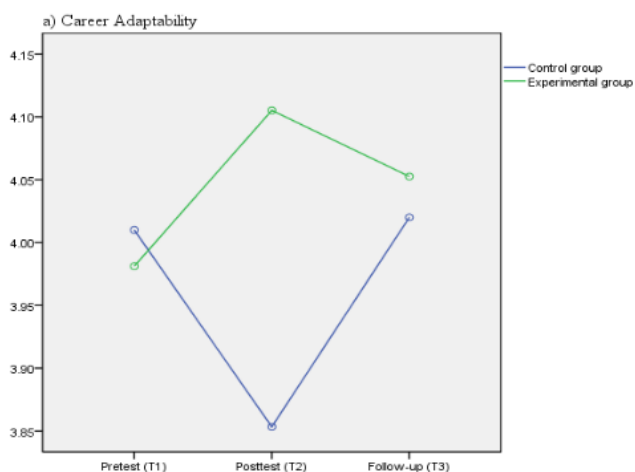


Fig. 3 Graphic representation of the dimensions of CA + cooperation at pre-training and post-training measurement for the training group and the control group

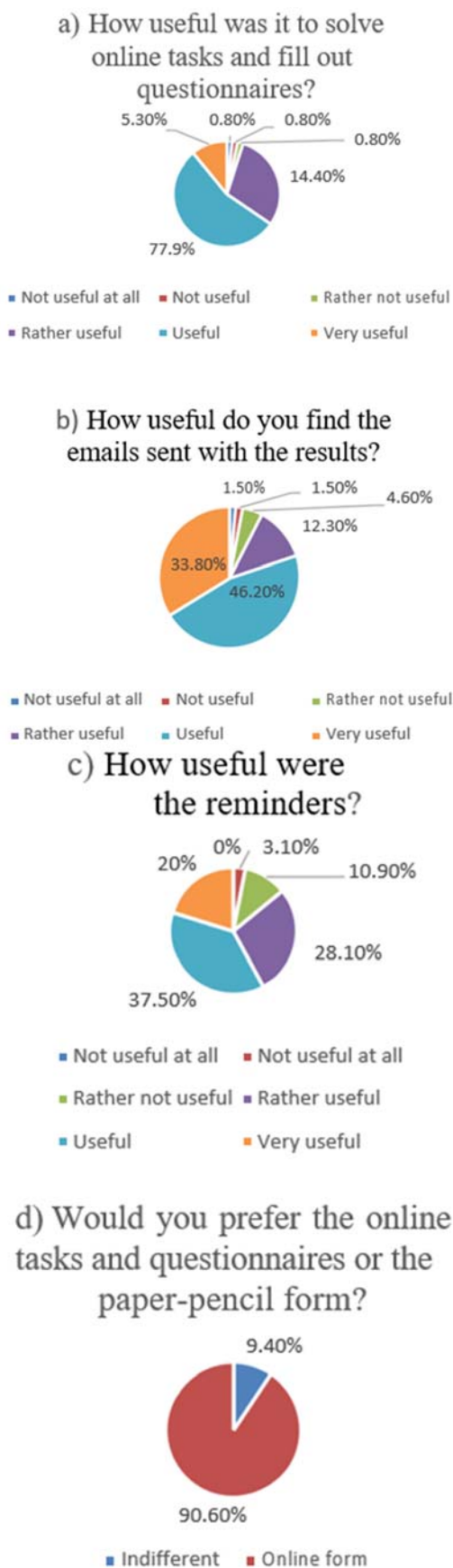


Fig. 4 Questions regarding the usefulness of the online program

The results show that CA started to increase in the experimental group and to decrease in the control group, but in the long run, the growth in the experimental group decreased. The situation is similar in the concern and curiosity and confidence subscales, but in the case of career control, there is a long-term increase in the experimental group. In terms of career satisfaction, this value started to increase slightly in the experimental group, but unfortunately, in the long run, there was no significant increase in career satisfaction.

C. The Subjective Usefulness of the Program as Perceived by the Students

During the post-test (Time 2), which had a total of 65 participants, each participant completed a questionnaire aimed at finding out how useful the online interface was. As the career intervention program is still in an experimental phase, we were curious about the program and the usefulness of its elements.

To the question of “How useful was it to solve online tasks and fill out questionnaires?” the answers were the following (Fig. 4 (a)): 77.9% found it very useful, 14.4% found it useful, 5.3% found it more useful, and 0.8% found it less useful, 0.8% did not find it useful and 0.8% did not find it useful at all.

It was interesting to explore to what extent the results sent via email were useful, as the results could be viewed on the page profile as well. Despite that, one third (33.8%) of the participants found the emails very useful, 46.2% useful, 12.3% more useful, while the remaining 7.6% thought that the emails containing the result were not very important (Fig. 4 (b)).

Examining how useful the reminders were to the participants, the following results were obtained: 20% responded that they were very helpful, 37.5% said that they were useful, 28.1% rather useful, and the remaining 14% did not find the reminders useful (Fig. 4 (c)).

Finally, regarding their preference to the modality for completing the tasks and the questionnaires, it turned out that no one prefers just paper-pencil form, 9.4% of the participants answered that the form does not matter for them, but the majority (90.6%) preferred the online version of the tasks and questionnaires (Fig. 4 (d)).

IV. CONCLUSIONS AND DISCUSSIONS

All in all, the website karrier-labor.ro can help students who need self-knowledge in order to create a more flexible attitude towards career development and construction. In addition, clarifying their goals and values can stimulate their CA. Developing the level of CA has shown strong growth in the short term, so we recommend to students who are engaged in long-term future career development, and this program adds to their personal development.

As for the importance of CA, there is no doubt that in individuals’ lives, this ability is essential for balanced and upward career development and for a satisfying life and career [25]-[29]. One of the aims of our research was to examine how this essential ability could be developed and enhanced. Similar to previous researches, this was partly successful [19]. However, more precisely, there are differences between the results, as this study has found that overall CA can be improved,

including curiosity and confidence, while other researchers found that confidence did not develop [19]. Although the modality of intervention is different here, this is one of the studies where follow-up is also included in the research. In another study, which also involved computer-intervention, three scales of CA (concern, control, confidence) were managed to be improved, but these were only post-intervention measurements [30]. In contrast, this paper's results show that just after the intervention, only the subscale of concern did not increase, whereas the rest did (control, curiosity, confidence).

Despite the fact that computer-based career interventions are less effective than traditional face-to-face career guidance [2], using contemporary digital technology in career interventions offers the possibilities for better engaging youth in developing their careers [10]. Last but not least, it may be more cost-effective in the long run.

What is still very important is user experience. Many programs attempted to reach students through computer programs in the field of career development and examine this from the students' point of view, i.e., the degree to which they are satisfied with these programs [3], [4]. All this is important because designing an online interface requires a lot of testing to be operational and sustainable in the long term.

Concerning the perceived effectiveness of the program, it is clear that students favor the online form of intervention. This result encourages career counselors to invest in online programs (software). These online programs can be useful on their own or even help or just facilitate traditional career counseling. As far as satisfaction is concerned, users reported that it was helpful to share results via email and the reminders were also useful.

Even the relatively low drop-out rate proves the success of the program. In [8], which was also a 4-week online intervention and examined its effectiveness, the drop-out rate was 80%, whereas in the current study, the drop-out rate was only 30.31%. This low drop-out rate can be explained not only by the popularity of online interfaces but the frequent email reminders may also have contributed.

Overall, this study has succeeded in creating a platform that can provide a good starting point for young people who want to improve their CA and develop their future careers. The fact is that the program alone does not provide the same level of career counseling as the traditional one, but it can more easily attract and launch the aspirations of career building in uncertain young people.

V. LIMITATIONS AND FURTHER DEVELOPMENTS

One limitation was that the experimental and control groups were chosen arbitrarily, were not randomized, so the research followed a quasi-experimental design. In the following, it would be worthwhile to include students from other faculties to get the chance to examine whether the chosen faculty influences the extent of CA development. In addition, as technology and advisory elements evolve, it is important to make the program more appealing, spectacular and interactive, thus increasing its future effectiveness.

REFERENCES

- [1] Whiston, S. C., Brecheisen, B. K., & Stephens, J. (2002). Does treatment modality affect career counseling effectiveness?. *Journal of Vocational Behavior*, 62, 390-410.
- [2] Whiston, S. C., Li, Y., Mitts, N. G., & Wright, L. (2017). Effectiveness of career choice interventions: A meta-analytic replication and extension. *Journal of Vocational Behavior*, 100, 175-184.
- [3] Barbour, M. K., Lahiri, M., Toker, S., & Unger Harrison, K. (2016). Career planning with CareerForward: Exploring student perceptions and experiences with in an online career preparation course. *Journal of School Educational Technology*, 11(3), 1-10. DOI: 10.26634/jsch.11.3.4785
- [4] Gati, I., Kleiman, T., Saka, N., & Zakai, A. (2003). Perceived benefits of using an Internet-based interactive career planning system. *Journal of Vocational Behavior*, 62(2), 272-286. [https://doi.org/10.1016/S0001-8791\(02\)00049-0](https://doi.org/10.1016/S0001-8791(02)00049-0)
- [5] Tannous, A. (2017). Perceptions towards Online Counseling among University of Jordan Students. *Modern Applied Sciences*, 11(12), 68-76. <https://doi.org/10.5539/mas.v11n12p68>
- [6] Tjalla, A., Herdi, & Kustandi, C. (2018). The influence of online career counseling "ACIS-Q" the vocational secondary high school students' (SMK) career maturity of in the province of Jakarta, Indonesia. *International Journal of Contemporary Applied Researches*, 5(11), 128-137.
- [7] Severy, L. E. (2008). Analysis of an Online Career Narrative Intervention: "What's My Story?". *The Career Development Quarterly*, 56(3), 268-273. <https://doi.org/10.1002/j.2161-0045.2008.tb00041.x>
- [8] Herman, S. (2010). Career HOPES: An Internet-delivered career development intervention. *Computer in Human Behavior*, 26, 339-344. <https://doi.org/10.1016/j.chb.2009.11.003>
- [9] Cook, A. & Maree, J. G. (2016). Efficacy of using career and self-construction to help learners manage career/related transitions. *South African Journal of Education*, 36, 1-11. doi: 10.15700/saje.v36n1a1225
- [10] Nota, L., Santilli, S., & Soresi, S. (2015). A Life-Design-Based Online Career Intervention for Early Adolescents: Description and Initial Analysis. *The Career Development Quarterly*, 64, 4-19. DOI: 10.1002/edq.12037
- [11] Pordelan, N., Sadeghi, A., Abedi, M.R., & Kaedi, M. (2019). Promoting student career decision-making self-efficacy: An online intervention. *Education and Information Technologies*, 1 - 12. DOI:10.1007/s10639-019-10003-7
- [12] Crisan, C., Pavelea, A. & Ghimbulut, O. (2014). A Need Assessment on Students' Career Guidance. *Procedia - Social and Behavioral Sciences*, 180, 1022-1029. <https://doi.org/10.1016/j.sbspro.2015.02.196>
- [13] EUROSTAT (2018) Work beats study for 25% of university drop-outs. Retrieved 12/2019, from <https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/DDN-20180404-1>
- [14] Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology*, 43(4), 510-526. <https://doi.org/10.1037/0022-0167.43.4.510>
- [15] Chan, D. (2000). Understanding Adaptation to Changes in the Work Environment: Integrating Individual Difference and Learning Perspectives. In *Research in Personnel and Human Resources Management* (pp. 1-42). Greenwich, CT: JAI Press.
- [16] Savickas, M. L. (2005). *The theory and practice of career construction*. In R. W. Lent, & S. D. Brown (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42-70). Hoboken, New Jersey: John Wiley & Sons.
- [17] Savickas, M. L. (2013). Career construction theory and practice. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 147-186). New York: Wiley.
- [18] Janeiro, I. N., Mota, L. P., & Ribas, A. M. (2014). Effects of two types of career interventions on students with different career coping styles. *Journal of Vocational Behavior*, 85(1), 115-124. <https://doi.org/10.1016/j.jvb.2014.05.006>
- [19] Koen, J., Klehe, U.-C., & Van Vianen, A. E.M. (2012). Training career adaptability to facilitate a successful school-to-work transition. *Journal of Vocational Behavior*, 81(3), 395-408. <https://doi.org/10.1016/j.jvb.2012.10.003>
- [20] Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 740-766). New York: John Wiley.
- [21] Barclay, S. R., & Stoltz, K. B. (2016). The Life Design Group: A case

- study vignette in career construction counseling. *Journal of Student Affairs Research & Practice*, 53(1), pp. 78-89.
- [22] Savickas, M. L. & Portfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80, 661-673. doi:10.1016/j.jvb.2012.01.011
- [23] Veres, A., Farcas, Zs, Petric, E. & Szamosközi, I. (2017). *Career Adapt-Abilities Scale Transylvanian Hungarian Form: Psychometric Properties and Relationship to Work Experience* (Paper presentation). In SWS International Multidisciplinary Scientific Conference on Social Sciences & Arts. 4th International Multidisciplinary Scientific Conference on Social Sciences & Arts (pp. 51-58), Albena, Bulgaria. DOI: 10.5593/sgemsocial2017/32/S11.007
- [24] Greenhaus, J. H., Parasuraman, S. & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcome. *Academy of Management Journal*, 33, 64-86.
- [25] Chan, S. H. J. & Mai, X., (2015). The relation of career adaptability to satisfaction and turnover intentions. *Journal of Vocational Behavior*, 1-35. doi:10.1016/j.jvb.2015.05.005
- [26] Chan, S. H., Mai, X., Kuok, O. M., & Kong, S. H. (2016). The influence of satisfaction and promotability on the relation between career adaptability and turnover intentions. *Journal of Vocational Behaviour*, 92, 167-175. doi:10.1016/j.jvb.2015.12.003
- [27] Ingusci, E., Palma, F, DeGiuseppe, M. C., & Iacca, C. (2016). Social and scholar integration and students satisfaction: the mediating role of career adaptability. *Electronic Journal of Applied Statistical Analysis*, 9, 704-715. DOI: 10.1285/i20705948v9n4p704
- [28] Maggiori, C., Johnston, C. S., Krings, F., Massoudi, K., Rossier, J. (2013). The role of career adaptability and work conditions on general and professional well-being. *Journal of Vocational Behavior*, 83, 437-449. doi:10.1016/j.jvb.2013.07.001
- [29] Rudolph, C. W., Lavigne, K. N., & I. M., Zacher, H. (2017). Career adaptability: A meta-analysis of relationship with measures of adaptivity, adapting response, and adaptation results. *Journal of Vocational Behavior*, 98, 17-34 <https://doi.org/10.1016/j.jvb.2017.06.003>
- [30] Hummel, H. G. K., Boyle, E. A., Einarsdóttir, S., Pétursdóttir, A. & Graur, A. (2017) Game-based career learning support for youth: effects of playing the Youth@Work game on career adaptability. *Interactive Learning Environments*, 26(6), 745-759, DOI: 10.1080/10494820.2017.1402062
- [31] Babes-Bolyai University Database (2019). (Data collected from the Department of Applied Psychology - Secretary). Unpublished raw data.